PRODUCT INFORMATION

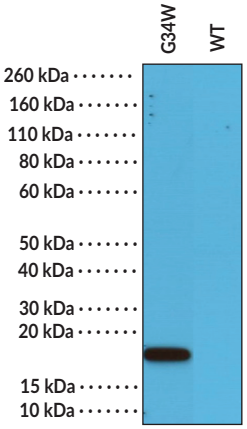
Histone H3.3^{G34W} Rabbit Monoclonal Antibody - Biotinylated (Clone RM263)

Item No. 42869

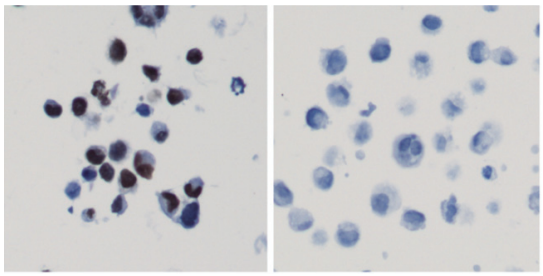
Overview and Properties

Contents:	This vial contains 50 µl of protein A-affinity purified antibody.
Immunogen:	A peptide corresponding to histone H3.3^{G34W}
Cross Reactivity:	(+) Histone H3.3^{G34W}; (-) Wild-type histone H3.3
Species Reactivity:	Species Independent
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Clone:	RM263
Host:	Rabbit
Isotype:	IgG
Applications:	Chromatin Immunoprecipitation (ChIP), ELISA, Immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution is 1:125-1:500 for ELISA and WB, and 1:100-1:200 for IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of cell lysates prepared from 293T cells transfected with a DNA construct encoding G34W mutant or WT proteins of histone H3.3 using Histone H3.3^{G34W} Rabbit Monoclonal Antibody - Biotinylated (Clone RM263).



Immunohistochemical staining of formalin-fixed and paraffin-embedded 293T cells transfected with a DNA construct encoding the histone H3.3^{G34W} mutant or WT histone 3.3 stained with Histone H3.3^{G34W} Rabbit Monoclonal Antibody - Biotinylated (Clone RM263).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Histone H3 is a nuclear protein and component of the nucleosome core, a basic unit of chromatin, that is essential for organizing genomic DNA in eukaryotic nuclei.[1] It is a globular protein that contains an unstructured N-terminal tail that extends outside of the nucleosome core and is subject to various post-translational modifications (PTMs). Metazoans have three histone variants: canonical histone H3.1, DNA replication-independent histone H3.3, and the centromeric variant CENP-A.[2] Histone H3.3 is incorporated into chromatin in a DNA replication-independent manner at sites of active transcription.[2-4] Histone H3.3^{G34W} is a point mutation expressed in giant cell tumors of bone (GCTBs) and is associated with tumor recurrence and metastasis.[5] Cayman's Histone H3.3^{G34W} Rabbit Monoclonal Antibody (Clone RM263) - Biotinylated can be used for chromatin immunoprecipitation (ChIP), ELISA, immunohistochemistry (IHC), and Western blot (WB) applications.

References

1. Hyun, K., Jeon, J., Park, K., *et al*. Writing, erasing and reading histone lysine methylations. *Exp. Mol. Med*. **49(4)**, e324 (2017).
2. Elsaesser, S.J., Goldberg, A.D., and Allis, C.D. New functions for an old variant: No substitute for histone H3.3. *Curr. Opin. Genet. Dev*. **20(2)**, 110-117 (2010).
3. Bjerke, L., Mackay, A., Nandhabalan, M., *et al*. Histone H3.3 mutations drive pediatric glioblastoma through upregulation of MYCN. *Cancer Discov*. **3(5)**, 512-519 (2013).
4. Tagami, H., Ray-Gallett, D., Almouzni, G., *et al*. Histone H3.1 and H3.3 complexes mediate nucleosome assembly pathways dependent or independent of DNA synthesis. *Cell* **116(1)**, 51-61 (2004).
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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM